

E 140 145 150 155 160 165 170 E

N 45

**TROPICAL STORM DOUG**  
 BEST TRACK TC-10W  
 07 AUG- 11 AUG 91  
 MAX SFC WIND 35KT  
 MINIMUM SLP 997MB

40

35

72

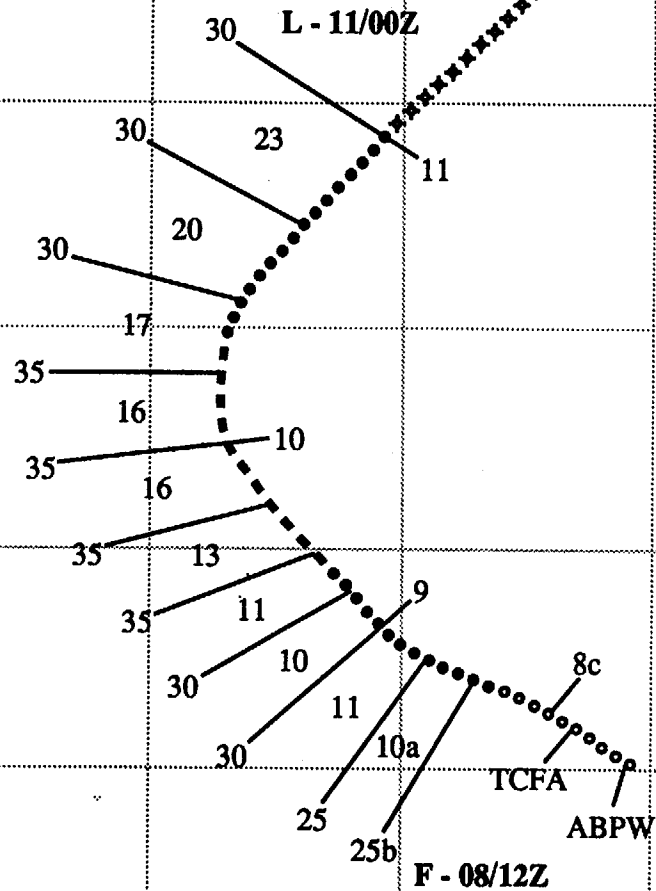
30

25

N 20

**LEGEND**

- 6-HR BEST TRACK POSITION
- a SPEED OF MOVEMENT (KT)
- b INTENSITY (KT)
- c POSITION AT XX/0000Z
- ..... TROPICAL DISTURBANCE
- ..... TROPICAL DEPRESSION
- TROPICAL STORM
- TYPHOON
- ◆ SUPER TYPHOON START
- ◇ SUPER TYPHOON END
- ✦ EXTRATROPICAL
- ✧ SUBTROPICAL
- \*\*\* DISSIPATING STAGE
- F FIRST WARNING ISSUED
- L LAST WARNING ISSUED



## TROPICAL STORM DOUG (10W)

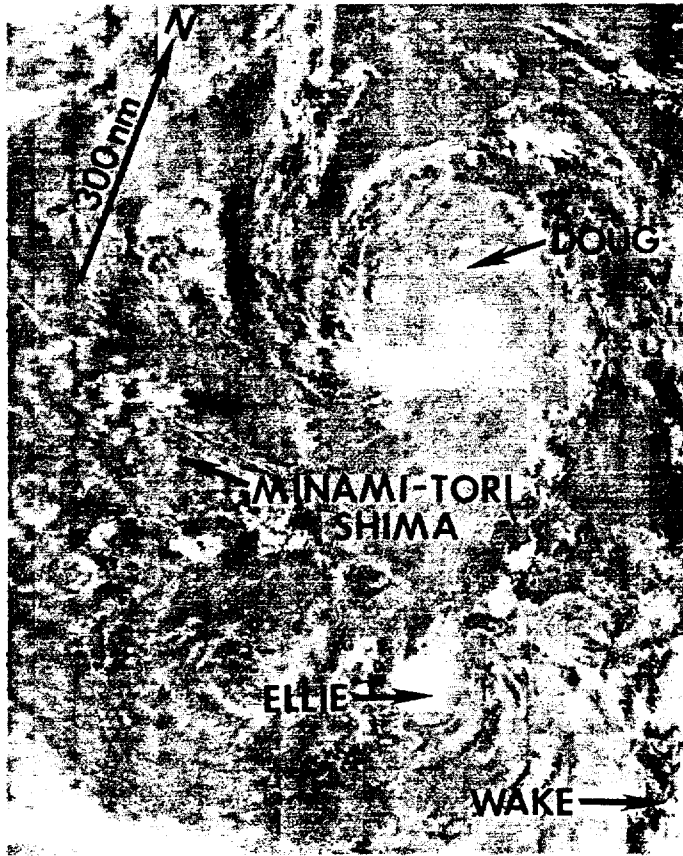
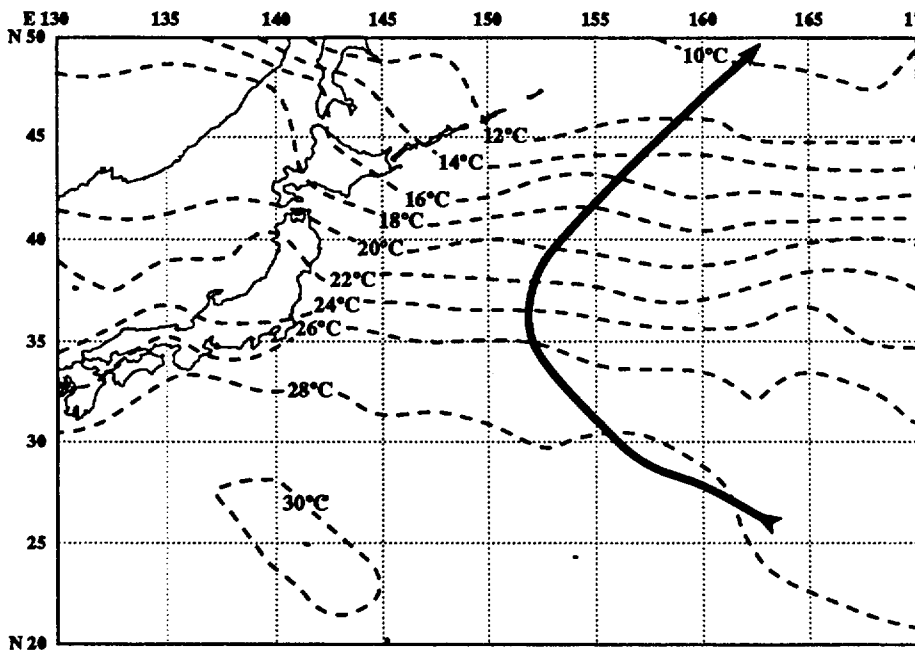


Figure 3-10-1 Tropical Storm Doug heads northwestward into colder waters (see lower left) as Typhoon Ellie (11W) begins to intensify (090311Z August NOAA visual imagery).

Doug was the first of a series of six tropical cyclones to form in August as part of a large NSS monsoon gyre (Lander, 1992). The tropical disturbance that became Doug was initially discussed in the 070600Z Significant Tropical Weather Advisory. A Tropical Cyclone Formation Alert was issued at 071955Z when convection developed around a well-defined low-level circulation center. Increased deep central convection prompted the first Tropical Depression warning at 081200Z. Doug was upgraded to a tropical storm 24-hours later as it tracked northwestward to the subtropical ridge axis, and then recurved ahead of a mid-tropospheric trough. Doug failed to intensify beyond minimal tropical storm intensity because it moved rapidly northward into an area of colder sea



surface temperatures and increased vertical shear before transitioning into an extratropical cyclone.